

QUANTITATIVE ASSAY FOR THE SIMULTANEOUS DETECTION AND SPECIATION OF BACTERIAL INFECTIONS

Abstract of the Invention

An adaptation of the real-time PCR assay allows for highly sensitive detection of any eubacterial species with simultaneous speciation. The assay relies on a 'multiprobe' design in which a single set of highly conserved sequences encoded by the 16S rRNA gene serves as the primer pair, and it is used in combination with both an internal highly conserved sequence, the universal probe, and an internal variable region, the species-specific probe. A pre-PCR ultrafiltration step can be used to effectively decontaminate or remove background DNA. The real-time system reliably identifies 14 common bacterial species with a detection limit of 50 fg.